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ABSTRACT

The purpose of the symposium reported in this document was to define the major needs of technology-based distance education and to recommend appropriate future actions. The 1-day roundtable assembled 40 of the most knowledgeable leaders in the United States and Canada on serving adults' postsecondary learning needs through telecommunication. The proceedings presented in this report are organized in two parts: (1) a summary of the initial presentations and group discussions, focusing on the following five ideas: think strategically; identify learning needs; redefine a television course; raise the level of awareness; and secure new sources of funding; and (2) the commissioned background paper, "Telecommunications and the Adult Learner," by George Willey. The paper discusses televised instruction versus traditional instruction; the mechanics of telecourses, including programs, print materials, and participation by local faculty; problems inherent in telecourses; needs assessment, in terms of adapting courses to television; and telecourse funding. Appendixes list members of the ITC symposium planning committee and symposium presenters and participants. (JMC)

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SYMPOSIUM

ON

TELECOMMUNICATIONS

AND

THE ADULT LEARNER

1991 Report

By Dee Brock

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Sponsored by the
INSTRUCTIONAL TELECOMMUNICATIONS CONSORTIUM

and the
AMERICAN ASSOCIATION OF COMMUNITY
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SYMPOSIUM ON TELECOMMUNICATIONS AND THE ADULT LEARNER

I. INTRODUCTION

The Symposium on Telecommunications and the Adult Learner follows two decades of success and expansion for college television courses. Every year more colleges use television courses, more students enroll in them, and more new courses are available. Annually, the mountain of evidence of student, faculty, and institutional satisfaction in the quality and utility of television courses expands.

Despite this positive history, major producers and institutional users of television courses are no longer completely secure in the continuation of this upward trend. For producers, the sources of traditional funding are drying up. Costs continue to rise while revenues remain fairly constant. Meanwhile, colleges are under increasingly severe budget constraints. Even though more students need and want the educational opportunities the television courses offer, they continue to be underrated within higher education. And yet, this is an area in which new applications of educational television can help alleviate the pressing national problems of access training/retraining.

The Instructional Telecommunications Consortium (ITC), a standing group within the American Association of Community and Junior Colleges, and the AACJC convened the Symposium on Telecommunications and the Adult Learner, in Washington, D.C., on February 14, 1991, to address these issues. The PBS Adult Learning Service assisted in organizing the event. The one-day roundtable convened forty of the United States' and Canada's most knowledgeable leaders on serving adults' postsecondary learning needs through telecommunication.

The day ended with enthusiasm about future television courses and their ability to continue playing an important role in providing education and training to adults. There was also commitment to the ITC's use of symposium discussion and advice to help develop a long-term plan for the field. Every participant agreed to continue serving as a resource person while the ITC develops and implements its plan.

A summary of the initial presentations and group discussions appears in Section II of this document. In preparation for the symposium, the participants read a background paper, "Telecommunications and the Adult Learner," by George Willey. This paper surveys the history of using telecommunications-based courses in reaching adult distance learners. It then lays out the major challenges confronting the field of postsecondary education. The full paper is Section III of this report.

The participants received the following background papers:

- "Producing Telecourses for Adult Distant Learners: A Cooperative Model," prepared by Leslie Purdy for the fifth annual Conference on Teaching at a Distance
- "Results of the ITC-Annenberg/CPB Project Telecourse Design and Needs Assessment Survey," by Sally Beaty
- "Teaching Telecourses: Opportunities and Options," excerpts by Toby Kleban Levine
- "Telecourse Production Costs Survey," prepared by various ITC members

- "Telecourse Utilization Survey Project: Third Year Report: Fall 1986-Summer 1989," and its "Executive Summary," by Ron Brey

A list of the members of the ITC Symposium Planning Committee and a full list of participants in the discussion are included in the Appendices.

II. SUMMARY REPORT

The goal of the Symposium on Telecommunications and the Adult Learner was to bring the experience and intellect of the participants to bear on defining the major needs of technology-based distance education and to recommend appropriate future actions. The meeting planners recognized that the participants could not cover the entire field of postsecondary learning via telecommunication in one day. While the use of many kinds of technologies, both on and off campus, are burgeoning, the symposium participants focused the discussion on preproduced television courses. This decision was based on four major assumptions:

- 1. Colleges and universities must continue to reach out to adult learners where they are. Colleges must continue delivering education to adults in their homes and workplaces in addition to attracting adult students to campus classrooms. Television courses, among all the technology-based courses, have the best chance of reaching into every home now.

- 2. Lifelong learning is no longer just a pleasant, perhaps somewhat shopworn slogan. Lifelong learning must be the new reality. "Keeping America Working," a well-known AACJC project, was successful because it was predicated on keeping America learning. The education and training requirements of the workplace and professional office will continue their steep climb and rapid change. Equally important is the accelerated expansion of the knowledge base needed in both the neighborhood and global arenas. A first-class life requires continuing a first-class education. Postsecondary education must become even more sensitive to adult needs and ever more innovative in tailoring education to the realities of life.

- 3. The successes of preproduced television courses in meeting adult learning needs are well-documented, and they must continue. Hundreds of studies support this assumption, as does the experience of most of the symposium participants.

- 4. Television is the most widely used technology for college courses. Television courses enroll more adult students through more colleges than any other technology-based course. A new research study by Ron Brey, scheduled for publication in the summer of 1991, indicates that television will increasingly be the technology of choice for colleges.

The initial presentations and the following group discussions converged on five major ideas:

- Think strategically
- Identify learning needs
- Redefine a television course
- Raise the level of awareness
- Secure new sources of funding

THINK STRATEGICALLY

The charge to think strategically came up repeatedly in the discussion. Until now, there has been no national plan for the development, production and use of television courses. Producers have created the courses they wished, driven by different reasons--by the particular needs of their institutions, the availability of funds for specific purposes, their own special interests, or an opportunity to build a course around a certain television series. Both the production, and use of television-based courses, which developed as risky, innovative educational initiatives, have reached a level of success and maturity that demands careful strategic planning. Opportunism and serendipity are no longer enough to ensure that the needs of distant adult students, or those of the participating institutions, will be well-served in the future.

- Television-based courses possess many strategic advantages:
- Demonstrated quality
- Convenient home and workplace delivery to fit adult lifestyles
- A cost-effective alternative to campus instruction
- Potentially lower costs per student for institutions
- Opportunities for individualizing instructional pacing for students
- Accessibility for all adults

There are also a number of unfortunate deficits for television-based courses:

- Inability to make the above advantages well-known to many critically important audiences
- Discrimination against distance learners in such areas as student aid, college services, transferability of credit, and access to a full range of degree and certificate programs
- Inadequate preparation, recognition, and compensation for the work of faculty in television-based courses
- A belief that technology-based courses are educational "frills" or inherently inferior to classroom instruction

The future of television-based education for adult distance learners depends on developing a strategic plan that addresses national needs; developing the courseware, delivery, and support systems to meet them; raising the level of awareness about telecourses and securing new funding. To be successful, national collaboration is important to this plan's development.

IDENTIFY LEARNING NEEDS

In several ways the participants stressed that future plans should be based squarely on the learner's needs. However, in developing a plan to promote adult distance learning, there are other key interests at stake. The institution's survival, the producer's desire to develop programs, and the technologist's aim of creating new systems are integral factors in creating distance learning programs. The symposium urged that television courses, like education in general, should enhance the student's societal contributions and personal fulfillment in addition to his or her success in the workplace.

The insistence on thinking strategically was a common thread throughout the discussion. There are multiple educational requirements in every segment of society that clearly cannot all be met at once. A national plan must set forth a priority list of target student populations and the courseware that will help meet their needs.

The participants frequently called for an ongoing assessment of learning needs, although they agreed this effort would not necessarily require annual, nationwide, primary research. Many institutions, state and federal agencies, and other organizations, such as labor unions and the National Alliance for Business, frequently conduct research on the needs of their constituencies. Collecting and analyzing these studies can provide powerful insight into the needs of learners.

Adults seeking undergraduate degrees have been the primary students targeted for television courses. The first two years of study are emphasized in courseware development. While these students remain one of the most important groups due to their numbers and the economic needs of producers and institutions, developing upper-division and graduate courses should also be encouraged for adults interested in obtaining associate degrees, certificates of achievement, or licenses.

Television courses are particularly well suited to serving certain audiences:

- Those in rural areas without easy access to postsecondary education
- Active and reserved military personnel
- The underemployed and unemployed
- Adults unprepared for college (such as those without a high school diploma, non-English speakers, and adults without literacy skills).
- Those seeking skills for workplace advancement or recertification
- Working adults seeking advanced or specialized college degrees, particularly those in education, electronic communications, health care, and business
- Retirees

As a side note, increasing literacy skills (as well as math and problem solving skills) has been a national priority for several years and is the subject for a new study by the Office of Technology Assessment (OTA). The OTA will evaluate how technology could be used to solve this national problem. This study and the OTA representative's encouragement warrants special attention for literacy.

An important dialogue developed around the issue of an adult curriculum. Are the degrees and certificate programs designed for recent high school graduates attending on-campus classes the right ones for adults? If there should be a special adult curriculum, should it be different for students on campus from those served at a distance? Similarly, should technology-based courses have different objectives and outcomes for the two groups due to their distinctive delivery modes? These issues remain unresolved, but they will clearly be a focus for future work.

From their own experience and research, the symposium attendees agreed that there are a number of subject areas which need course development: literature, math, science, international studies, foreign languages, arts and humanities, interdisciplinary studies, critical thinking skills, and cross-cultural awareness, among others. The vast array of possibilities reinforces the need for a master development plan.

There are other vital areas to be cultivated beyond developing individual courses and targeting special audiences. Adult students not only want to acquire knowledge and skills, but generally seek proof of their achievements in the way of credits, degrees, certificates, and licenses. Increasingly, the colleges that offer these courses want to present sequences that will result in the completion of full programs of study. Consequently, a master plan should work to ensure acceptability and transferability of individual course credits. Full degree, certificate, and license programs should also be created.

REDEFINE A TELEVISION COURSE

For almost two decades, the terms "telecourse" and "television course" have been used to name a television-based college course. The model has remained fairly constant despite improvements in the elements and overall design.

According to that model, a telecourse is usually composed of thirteen to fifteen hours worth of television programming, divided into thirty- to sixty-minute segments. Textbooks are chosen from published books or are written specifically to accompany the telecourse. A faculty guide is included, as well as a study guide that serves as the student's map and integrates the course and other materials into a coherent design. Lab manuals, home lab paraphernalia, audio cassettes, and computer software might be added depending on the course. Finally, colleges usually depend on broadcast, primarily over public television stations, to distribute the programs.

A recent survey of some 200 colleges revealed that they believe the current model is right on target. However, several symposium participants suggested that the term "telecourse," which once signified innovative, non-residential learning, is now a limiting one. There needs to be a re-examination of the subject and a departure from a rigid formula.

The role of video, particularly in courses at the upper-division level, and the amount of video needed require deeper investigation. However, the number of video hours should not be limited if using other media cannot produce the same results. There is also some debate concerning the quality of video needed. For example, do all videocourses require broadcast quality and electronic distribution? Some think that upper-division courses do not, since their information is so specialized. Others disagree, particularly when the course might serve other audiences if broadcast quality is maintained.

Telecourses, once envisioned as a television offering, are now distributed in a variety of ways. Broadcast via public television is still the number one distribution vehicle, but cable, instructional television fixed service (ITFS), low power TV, microwave, satellite, and videocassettes are increasingly important. One major consortium in Illinois uses videocassette distribution far more than any other means, and several attendees opined that this system will become even more widespread.

Producers should be innovative and flexible in creating courses so that each element can be utilized in different ways and new configurations can yield innovative uses. One benefit from such planning is that increasing these possibilities will result in more sales. This kind of approach not only enhances the product, but it also improves the chance of partnering. For example, computer courseware, videodiscs, CD-ROM, and multimedia productions are products that many well-financed private companies develop and distribute. These firms might invest in courses that use their media, just as book publishers have in the past.

Current conventions of marketing television courses may be a barrier to their widest use. The course elements and the rights to distribute them are often sold separately. For instance, television programs for most courses are licensed both as a full-credit class and as a set of video programs to be used individually in classrooms. Sometimes the rights to use a course on different distribution systems are marketed independently. These practices confuse the marketplace and may discourage institutions from purchasing or using the courses to their fullest advantage.

Another significant issue in redesignating telecourses is student access to data, libraries, faculty, administration, counseling, and other services open to on-campus students. The need for these benefits is critical to making the telecourse model better suit student needs. Current technological links and software make them viable for distance learners now, and any national plan should include them.

RAISE THE LEVEL OF AWARENESS ABOUT TELECOURSES

Despite more than two decades of success, several critical audiences are unaware of the benefits of television-based instruction to adult learners and to our nation's future. To overcome this disadvantage the field should change the message, make it visceral, and, most importantly, formulate a plan for increasing awareness.

Thinking strategically depends on defining audiences and tailoring messages to each of them. The most important groups to reach are potential students, product purchasers and licensees, funders, and those influencing public policy and opinion. Ironically, the attendees ruefully admitted that the awareness level of their own institutions and organizations still needs work. Success in making technology-based education a part of these strategic plans would go a long way toward achieving their other awareness objectives.

Some of the most important student target groups are the military, active and reserve; rural populations; labor unions; K-12 school employees; government employees; and health care workers. At the same time, the group agreed that a national awareness campaign to influence policy makers, opinion leaders, and funding sources must be a higher priority. State and federal government, the corporate world, foundations, and the national media need to be told about the benefits of telecourses.

Several ideas would resonate among these audiences, including:

- Technology offers the only hope for equality of access to information and education.
- The "have-nots" of the nation will form a steadily declining information/education underclass without a technology-based outreach effort.
- Technology can reach and teach more people for less money than traditional classrooms.
- New boundaries in education should be drawn on the basis of need, not politics.
- Nothing plays like success; thus, the collection and promotion of success stories is critically important.
- Technologies are tools to help solve problems and meet needs. They are not ends in themselves or the answer to every question.
- This field should quit apologizing and start asserting the proven excellence and value of telecourses.

A nationally coordinated campaign is needed to make the most impact on the target audiences. The design must include ways of adapting materials and messages for local and state use. Influencing state governors, legislatures, and agencies; regional commissions and organizations; and local business leadership is critical. Stimulating colleges to take an active role in an awareness campaign is also an essential part of a successful initiative.

SECURE NEW SOURCES OF FUNDING

The cost of producing television courses has increased sharply, but prices for using these courses have remained fairly constant. Consequently, funds for course production are more difficult to obtain when larger upfront costs are required. Meanwhile, the new decade began with the disheartening news that the Annenberg Foundation would not put any new funds into the Annenberg/CPB Project. For nearly ten years, this organization annually invested about $5 million into developing telecourses (and several more million dollars yearly in other technology projects and research to support higher education). This was the single largest source of funds ever available to television course development and its loss makes the current dearth of funding particularly painful. The need to find new monetary sources is especially acute.

Funding is a major problem for education in general. There are few new dollars and many severe needs. To successfully bring more dollars to bear on television courses, the field will have to plan and act strategically. It should concentrate on obtaining financing through:

- Influencing federal and state legislation
- Securing federal and state funding
- Forming new partnerships

- Increasing revenues from sales and licenses of products
- Successfully seeking grants from foundations and corporations

The federal role in fostering technology in education is quite limited. However, it does include developing the infrastructure (through the Public Telecommunications Facilities Program and Star Schools Act), research (with NASA and the National Science Foundation), and setting telecommunications policy (through the Federal Communications Commission).

There are a few opportunities to influence federal legislation. The reauthorization of the Higher Education Act is a promising and immediate target. Many other possibilities in the federal arena are not as obvious. Legislation concerning societal elements--such as labor, commerce, agriculture, social services, energy, defense, elementary and secondary education, public broadcasting, and others--may offer occasions to include provision for technology-based education and training for adult learners.

States are key players in building the infrastructure. A major problem in interesting them in funding is that technology is indifferent to state and institutional boundaries. The field must develop state policies that encourage the integration of systems within and without state borders to protect and expand the delivery of technology-based courses. Like the federal government, states take a very limited role in assisting software development. Thus, the field will have to think expansively about state bills where provisions for education and training, delivered via technology, might be interjected. Special attention must be given to the reallocation of federal money returning to states in block grants. Planners have to think nationally to effectively meet educational needs while they act locally, securing state funds for cooperative use in addressing national goals.

The ability of telecommunications to offer equity of access, cost-effectiveness in serving more people at a lower cost per student, superior quality, and special resources to meet unique needs, are some of the most useful messages to influence federal and state bills. But the symposium participants stressed repeatedly that a collaborative effort on the part of postsecondary education, the organizations serving it, and the business and community interests that benefit will accomplish the best results.

The power of partnerships was a key theme in the discussion about securing new sources of funding. Collaboration was praised not only as an asset in seeking funds, but also for other benefits, including increasing awareness about the project among new audiences and lending new perspectives to its creation and use. Some potential partners that telecourse producers and user institutions should cultivate are:

Local school districts
State education agencies
Higher education institutions
Educational consortia
Federal and state agencies
Regional planning commissions
Economic development councils
Civic groups
Public television stations
Science centers
Museums
Businesses

Cable operators
Technology hardware and software companies
Publishers

Institutions that wish to expand or enhance their use of technology-based courses may find partners to provide underwriting for the acquisition, utilization, and distribution of courseware within their service areas. Likely partners are companies and agencies with special education and training needs. Others are organizations promoting community welfare, such as Rotary clubs or environmental groups. Collaboration with colleges and other educational providers is another avenue for securing funds.

Producers of television courses can develop the right partnerships to bring more funding more quickly. Likely partners include book and software publishers and colleges expecting to use the course. The expertise and reputation of a partner might enhance the funding proposal in the eyes of its evaluators to help ensure its acceptance.

Another method of easing the financial burden is to increase product revenue. Producers could open markets by enlisting new using institutions, helping to increase student enrollment and other uses of the course materials. Additionally, producers should be encouraged to be more creative in designing components and special configurations to enhance their flexibility and use.

Foundations and corporations are other viable sources of funding. Despite the old saw that if one has a good idea, money can be found to implement it, fund raising is usually difficult and time-consuming for a variety of reasons:

- There is a good deal of competition.
- The priorities for funding organizations, particularly corporations, change rapidly, often without warning.
- Each organization must be approached individually and personally with as much knowledge as possible about why and how this sponsor makes decisions. It must be understood that published sources never have the full story about how these organizations really work.
- Every proposal requires a sales campaign.

The last two points engendered the most discussion. Increasingly, one experienced fund raiser related, corporations want something for their money. While they may want to do good, they are likely to have more concrete and even business-related aims. Even foundations have their own philanthropic goals and objectives by which they judge proposals.

As a rule, the funding experts agree, the more a grant proposal describes a full project and all of its elements--television, print, computer software, audio and videocassettes, events, etc.--the better. The length of the proposal is not important, but a sweep of the possibilities is critical. Proposals should illustrate as many links with the environment as possible. Individual producers are at a disadvantage when they seek grants for only one telecourse at a time. They should first look to funders at the prospect level, not at the project level, until there is rapport and interest in one or more projects.

NEXT STEPS

After a day of lively interchange and passionate debate, the symposium participants urged the ITC to keep its momentum in planning for the future production and use of television courses. Following through on the agenda will not be easy, but there was a firm commitment to do so and a belief that the symposium's emerging themes--thinking strategically, identifying learning needs, redefining telecourses, raising the level of awareness, and securing new sources for funding--form a solid starting point for a long-term plan.

Next steps for this initiative include the distribution of this written report, using the discussion and its advice as a part of a future planning effort for the ITC, employing the symposium participants as resources, and encouraging input from ITC members and others for designing future goals.

Dee Brock is a consultant in educational telecommunications and served as the moderator of the Symposium on Telecommunications and the Adult Learner. Most recently, Brock has been the senior vice president of education for the Public Broadcasting Service.

III. COMMISSIONED BACKGROUND PAPER

TELECOMMUNICATIONS AND THE ADULT LEARNER
by George Willey

BACKGROUND INFORMATION

Two major factors affecting higher education in the United States are coming together as the century draws to a close:

- Colleges and universities, well aware of the difficulties in attempting to serve a growing and increasingly diversified population, are also becoming aware of assistance available to them through technology
- Television in particular has demonstrated its ability to provide high quality home--and workplace-delivered instruction

The idea of using television to assist higher education is at once both compelling and perplexing. The concept is compelling because of the results already achieved. During the past two decades the number of college-level courses offered over television has steadily increased to the point where, in 1990, an estimated 500,000 adult learners were enrolled in television-delivered courses offered by some two thousand colleges and universities.

Despite such demonstrable success, however, two very perplexing questions must be addressed to ensure the continued use of television to supplement campus-based instruction in the future:

- What courses of study are most appropriate and most needed for adaptation to television?
- Who will pay for the further development and delivery of higher education via television?

It is important to note that basic preliminary questions relating to the quality and effectiveness of televised instruction need no longer be asked. Study after study has compared student success in televised courses with that of traditional classroom experience, with every study yielding essentially the same result: no significant difference. Students receiving instruction via television generally perform as well as (and often better than) students in the classroom.

For literally hundreds of thousands of adults who are homebound with children or whose work or personal circumstances prevent participation in campus classrooms, opportunity for higher education simply would not be possible without television.

TV VS. TRADITION

Colleges and universities carry full responsibility for maintaining the quality of the instruction they provide. This leads many institutions to rely heavily upon long-standing, time-tested methods of instruction.

The majority of institutions balance the virtues of tradition with those of flexibility and innovation. They recognize that their primary objective is to provide students with the best possible opportunities to learn. To students, a college course is a college course, regardless of when it is taught, where it is taught, how it is taught, or who teaches it. Individual instructors may choose to emphasize a variety of teaching methods: lecture, discussion, outside reading and research, even independent study. The important thing is not how any given course is taught but the success it enjoys in fulfilling its academic objectives.

When television is utilized as yet another instructional method, it affirms this important principle: the integrity and quality of any given course is not determined by the number of class meetings or the instructional method employed but by the learning that takes place. Telecourses, specifically, should be thought of as courses of study adapted to television, integrated with study materials, and guided by local faculty. Their purpose is to provide learning opportunities for adults who otherwise would remain unserved or underserved by higher education.

HOW DO TELECOURSES WORK?

There are perhaps as many varieties of televised instruction as there are differences in classroom teaching. At the most basic level, Stanford University and other institutions utilize television to transmit live classes simultaneously to several receiving sites where engineers or other professionals can participate in courses aimed at upgrading their skills. Similarly, some colleges record the lectures and class discussion within selected courses and later broadcast these lessons over local cable facilities. In both such examples, television is used entirely as a means of delivering traditional instruction; virtually no attempt is made to adapt the instruction to the medium.

In strong contrast, the term "telecourse" refers to a far more ambitious instructional design involving three essential components: television programs, printed support materials, and local faculty participation. Other components, such as audio cassettes or computer programs, may be added as circumstances arise. The primary ingredients of every telecourse, however, remain the three indicated above: programs, print materials, and participation by local college faculty.

Programs:

The programs in a telecourse correspond to the classroom experience on campus. As is true of the classroom, the programs present and explain the bulk of information to be gained by students. Apart from sharing this objective, however, there is very little similarity between a classroom lecture and a telecourse lesson.

The difference between telecourses and classroom instruction begins with course development. Unlike the typical college course, which is outlined and presented by a single individual, a minimum of one year is devoted to the planning of any telecourse being developed for wide distribution. A design team involving subject matter experts and instructional designers considers academic objectives and priorities. As each course is outlined, thought is given to guest participants, locations to be visited, text materials, student assignments, testing, and the manner in which all such elements can best be coordinated by the individual colleges that will eventually offer the course to students throughout their respective areas.

A variety of documentary or other presentational techniques are used in presenting the material. Participation by prominent authorities, the assembling of artifacts and documents, on-site observations, archival film, and graphic illustrations all facilitate learning. The result is first-rate television, worthy of wide attention while providing instruction that cannot be matched for meticulous planning, authoritative information and analysis, and stimulating presentation.

Print Materials:

As indicated above, however, the programs represent only one of the essential components of a telecourse. Equal importance is attached to the print materials that accompany every course. In some cases an existing textbook meets the needs of the telecourse and is selected for such use; in other cases, a new text is created to provide students with necessary background and detail. In either case, an additional study guide is developed that coordinates each lesson in the television series with appropriate parts of the textbook. The study guide also outlines specific course objectives and procedures, recommends additional reading, and may provide self-tests for the distant student to measure individual progress.

In addition to the textbook and study guide, each telecourse provides instructors with a faculty manual to assist in offering courses at the local level. This manual provides the college instructor with information regarding the development of the course and the background of those who created the materials. The objectives of the course are made very clear, together with suggestions as to how the individual instructor might use his or her expertise to best advantage in supervising the educational experience. Optional examination questions are usually included in the faculty manual to further assist individual instructors.

Other print materials are sometimes used to support telecourse instruction: special readers or anthologies, workbooks, and laboratory manuals as needed. The selection of existing print materials and development of additional material occur during the two-year span of time required to design and produce each telecourse.

Participation by Local Faculty:

Once produced, these television and print materials are announced to the higher education community and are publicized by their producers, by college consortia organized specifically to work with local stations and cable services in offering telecourses, and by the Adult Learning Service of PBS, which contracts with colleges to transmit several such courses each term. Video and print preview materials are made available to colleges to facilitate their decision and selection.

Individual colleges assign one of their own instructors to work directly with each telecourse selected for local broadcast. In this manner, each college is able to add whatever input its faculty might wish to make. In practice, most instructors find that their role becomes one of maintaining contact with the students through correspondence, monitoring assignments, responding to questions via telephone, and scheduling meetings to review and test student progress. However, many faculty have added special assignments tailored to local student needs and local community and college resources.

Colleges list telecourses within each term's schedule of classes and follow traditional practice in enrolling students. The first telecast of every course is preceded by an on-campus orientation meeting, giving the students and the college instructor an opportunity to become acquainted with each other and with the requirements and procedures of the course. Individual instructors determine the frequency of subsequent class meetings for review and testing.

The lessons are broadcast at various times, announced in advance, and often recorded at home for later viewing by students whose work schedules conflict with broadcast times. Students are advised of the best times to contact the local instructor with questions or to discuss any difficulty they may be experiencing with the class as it progresses. The evaluation of student performance in all assignments and testing are the responsibility of the local instructor.

Thus, it could be said that most aspects of the learning experience in a telecourse, with the exception of the use of television programs themselves, follow traditional college and university procedures. And yet, telecourses are indeed different in significant ways for both students and teachers. The distance factor, the nature of the television medium; and the mixture of visuals, print, home study, and interaction with the instructor and other students are new and different.

PROBLEMS

The quality of telecourse instruction is well-established and the system is working extremely well. The number of colleges and universities using telecourses continues to increase every year, with a corresponding increase in the number of students served. What's the problem?

There are in fact two major problems: the system is operating without any overall policy or focus in the selection of courses being developed, and production funds are diminishing while costs are increasing, seriously threatening the future of this activity.

NEEDS ASSESSMENT

The considerable time, energy, and cost of adapting courses to television requires that careful thought must be given to choosing courses for such development. More often than not, these choices are driven by popularity: which courses can be expected to be utilized by the most colleges and appeal to the largest number of students?

In recent years the ITC has attempted to bring more in-depth planning and cooperation to the discussion of what courses are most needed. Funded by the Annenberg/CPB Project, this research represents the first step in developing a national perspective on both current utilization patterns and on specific courses needed for the future. Other research from the Public Broadcasting Service, the U.S. Department of Education, and the Corporation for Public Broadcasting have helped document the extent of use of telecourses at the higher education level.

Many important questions relating to telecourse planning remain to be answered. For example, are all of the televised courses applicable to baccalaureate degree programs? Should they be? Should there eventually be enough telecourses, covering enough subjects, to enable distant learners to earn a college degree? Should attention be directed to non-degree, non-credit telecourses that would provide valuable lifelong learning opportunities? Should more attention be given to special programs such as English as a second language, remedial courses, or college preparatory work? What about vocational education and professional certification programs?

Lacking data from a broadly based assessment of educational needs, producers understandably have focused their efforts on one heavily populated corner of higher education: lower-division, large-enrollment general education classes.

Because the initial investment is so high and there are so few funding sources for the development of telecourses, production has been undertaken by only a handful of educational organizations. These producers have avoided duplicating their efforts by voluntarily keeping one another informed through their participation in the ITC. They often collaborate on course development to pool limited resources.

It is safe to say that no telecourse is produced without serious effort first being made by the producer to determine the need for that course. However, considerably more research is needed to assess how television can address serious national needs for adult education, such as basic skills and literacy, English as a Second Language, vocational education, and lifelong education.

FUNDING

However much the future of telecourses may require a thorough assessment of educational needs, the problem of funding remains a much greater obstacle to any further development.

The problem is one of basic economics. Telecourses--with their need for instructional design and high-quality production--are very expensive. Yet, the expense can be justified not only in terms of reaching non-traditional adult learners who otherwise would be excluded from higher education, but also in view of the larger numbers of students that can be served over a period of time.

The average useful life of a telecourse is six to eight years. Amortized over this period of time, during which many thousands of students are served, the instructional cost-per-student is comparable to the expense of traditional classroom activity. From a production standpoint, however, large sums of money are required up front and the return is very slow at best. Specifically, the cost of developing a telecourse ranges from $800,000 to $3 million or more. Development of coordinated print, testing, and promotional materials may be additional costs.

Some of the factors which relate to the difficulty of funding production of telecourses are:

- Colleges and universities rarely have significant funds available for development of instructional systems. Development of courses is usually done by individual instructors.
- Unlike the creation of computer software, which has been done by industry for profit, production of telecourses has not, so far, become a viable commercial activity.

- Federal and state money has been available for purchase and installation of hardware ("infrastructure"), not for the creation of courses to be delivered via the new technologies.

- No foundation or corporate funds are currently available to support the creation of telecourses on a long-term basis. The Annenberg/CPB Project, which has done much to increase the number of good quality telecourses in recent years, will not be doing so in the future.

- The process of searching for grant money, partnerships, and investors requires a large commitment of staff and facilities. Most producing institutions are not able to mount this effort on a sustained basis.

The bottom line reads as follows: As useful as television may be to higher education in this country, there can be no further development unless the problem of funding can be solved.

CONCLUSION

One of the most significant breakthroughs in higher education in recent years has been in the use of technology, particularly the development of telecourses, which provides college-level instruction to an estimated half-million adults every year. This number can continue to increase, and the instruction should become far more comprehensive. However, for additional development to be most useful it should be based upon a thorough analysis of objectives and educational needs. Even more critical, a long-term solution to the problem of funding must be found if television's potential for serving higher education is to be realized.

As the twenty-first century approaches, a new era of higher education will emerge. It is essential that technology be included in all such planning for the future, and the enormous reach and instructional power of television cannot help but challenge and encourage educators to undertake such planning with high expectations.

George Willey is a consultant for the ITC and former executive director of the Bay Area Television Consortium.

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ABOUT THE INSTRUCTIONAL TELECOMMUNICATIONS CONSORTIUM

The Instructional Telecommunications Consortium is an affiliate of the American Association of Community and Junior Colleges. Established in 1977, the ITC is a vehicle for community, technical, and four-year colleges interested in increasing and improving the use of technology-delivered distance and independent learning. ITC provides its member institutions with opportunities to participate in professional development activities that further the use and understanding of instructional telecommunications.

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